OWNER'S MANUAL

HIGH - EFFICIENCY
GAS-FIRED FURNACES

UPFLOW/HORIZONTAL MODELS: P*UR / G9T-UP / FG9-UP
DOWNFLOW MODELS: P*DH / G9T-DH / FG9-DH

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WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch; do not use any phone in your building.**
  - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

Congratulations . . .

On your purchase of one of the most versatile furnaces available in the industry today. This compact, energy-efficient furnace has been precision designed, manufactured of high-quality materials and has passed many rigorous inspections and tests to ensure many years of satisfactory service. This booklet is meant to increase your understanding of your unit, tell you how to operate it efficiently and how to obtain the greatest measure of comfort at the lowest operating expense. Please read this booklet thoroughly. We appreciate your interest in our product and your decision to purchase our furnace. Enjoy your comfort.

HOW YOUR GAS FURNACE WORKS

Your furnace is a very easy appliance to take for granted. Season after season, it sits there in your home, keeping you warm and comfortable. For this reason, you may never have given much thought to the way your furnace operates. In order to get the safest and most efficient operation from your furnace, though, you should understand how your furnace does its job.

When you set your thermostat to provide more heat in your home, you are starting the heating cycle of the furnace. First, the inducer motor starts to purge the heat exchanger of any remaining gasses. Next, the hot surface ignitor glows and after a warm-up period the gas valve opens and ignition occurs. A short time later the blower starts and distributes the warm air throughout the home. When the temperature set on your thermostat is reached, the gas valve closes, the main burners are turned off, and the blower continues to run until the remaining warm air in the system is distributed. When the blower stops, the heating cycle has ended.

KEEP THE FURNACE AREA CLEAR

NEVER . . . use the area around your furnace as a storage area for items which could block the normal flow of air. This flow of air is required for ventilation of the various furnace components.

⚠ WARNING

Do not block or obstruct air openings:

1. On the furnace.
2. Air openings communicating with the air in which the furnace is installed.
3. The spacings around the furnace.

NEVER. . store flammable materials of any kind near your furnace. Gasoline, solvents, and other volatile liquids should be stored only in approved containers outside your home. These materials vaporize easily and are extremely dangerous.

NEVER . . .store cleaning materials near your furnace. Materials such as bleaches, detergents, powdered cleansers, etc., can cause corrosion of the heat exchangers.

⚠ WARNING

Insulating materials may be flammable.

⚠ CAUTION

When a furnace is installed in an attic or other insulated space, or if insulation is added, examine the furnace area to ensure that the furnace is kept clear and free of insulation.

START-UP AND SHUTDOWN GENERAL INSTRUCTIONS

Read and follow these procedures CAREFULLY and COMPLETELY.

Before attempting to start your furnace, always do the following things FIRST:

- Turn the thermostat OFF.
- Open windows or make other provisions to ventilate the area around the furnace.
- If the blower is running, wait until it shuts off automatically.
- Turn off all electrical power to the furnace.
- Make sure all metal surfaces of the furnace have cooled to room temperature before beginning.

FOR YOUR SAFETY, READ BEFORE OPERATING:

⚠ WARNING

If you do not follow these instructions exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.

A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burners. Do not try to light the burners by hand.

B. BEFORE OPERATING, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

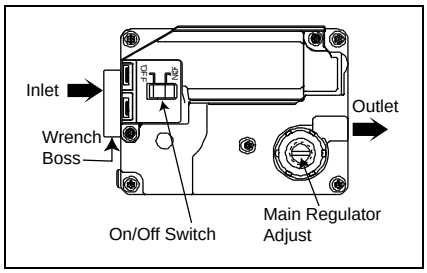
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Extinguish any open flame
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.

⚠ WARNING

Do not use this furnace if any part has been under water. Immediately call a qualified service technician to inspect the furnace and to replace any part of the control system and any gas control which has been underwater.

LIGHTING INSTRUCTIONS

1. STOP! Read all preceding safety information.
2. Set the thermostat to lowest setting.
3. Turn OFF all electrical power to the appliance.
4. This furnace is equipped with an ignition device which automatically lights the burners. Do not try to light the burners by hand.
5. Remove the control access panel.
6. Turn gas control switch to "OFF".
7. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow step B in the preceding safety information. If you don't smell gas, go to the next step.
8. Turn gas control switch to "ON". Do not force.
9. Replace control access panel.
10. Turn on all electrical power to the appliance.
11. Set thermostat to the desired setting.
12. The unit will go through a 17-second igniter warm-up period. Then if the unit does not light within 4 seconds, the unit will go through two additional cycles before locking out.
13. If the furnace will not operate, follow the instructions "To Turn OFF Gas To Furnace" and call your service technician or gas supplier.



Gas Valves - White-Rodgers 36F52-204

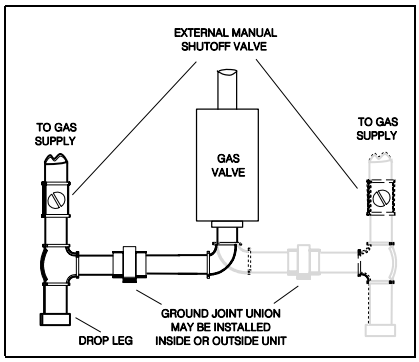
SHUTDOWN INSTRUCTIONS

To Turn OFF Gas To Furnace

⚠ CAUTION

Should overheating occur, or the gas supply fail to shut off, shut off the main manual gas valve to the furnace before shutting off the electrical supply.

1. Set thermostat to the lowest setting.
2. Turn off all electrical power to the furnace if service is to be performed.
3. Remove the control access panel.
4. Turn gas control switch to “OFF”. If gas valve is equipped with a control knob, turn knob clockwise to “OFF” position.
5. Replace the control access panel.


EXTERNAL MANUAL SHUTOFF VALVE
TO GAS SUPPLY
GAS VALVE
TO GAS SUPPLY
GROUND JOINT UNION MAY BE INSTALLED INSIDE OR OUTSIDE UNIT
DROP LEG

Typical Gas Piping

YOUR FURNACE'S FILTER - WHAT IT DOES

The filter in your furnace takes the lint and dust out of the air that passes through it. This keeps dirt particles from getting into the moving parts of the furnace, where they could cause serious damage. It also keeps the dirt from circulating through your home.

As the filter continues to collect these particles, it becomes clogged and no longer allows enough air to circulate through the furnace. If this happens, the heat exchangers and blower motor could overheat; a potentially dangerous situation. It is very important to keep the air filter clean! Never operate your furnace without a suitable air filter.

FREQUENCY OF CHECKING FILTERS

Clean your furnace's filter at least every three months. If you need to replace a filter, check the filter chart to be sure you install the right size and type of filter for your furnace.

If your home is new, you should check the filter every week for the first four weeks after you begin to use the furnace, and then at least every three weeks after that, especially if the system runs constantly.

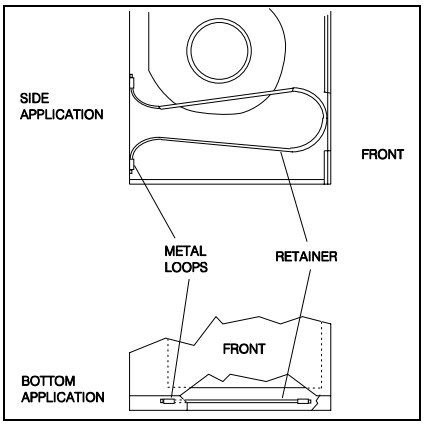
LOCATING / REMOVING FILTERS

Upflow Furnaces

Most upflow furnaces have their filters located on the side or bottom of the furnace in a filter frame.

If your furnace has this type return filter frame, remove the door by pulling on it. Slide the filter out of its channel. To replace after cleaning, slide filter into place and snap the door on the end of the filter rack.

Some installations may have filters located in the blower compartment. Check with the installer for your filter location.



Upflow Furnace Internal Filter Applications

To check filters located in the blower compartment, remove th upper furnace door by lifting up. Pull out bottom of door and lower from furnace. Remove th blower compartment panel by lifting up.

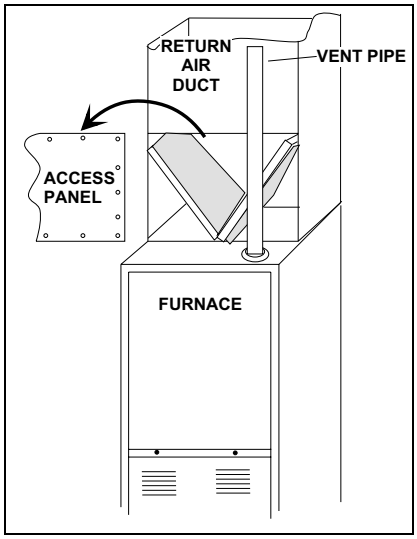
Note:The spring-loaded safety cutoff switch, mounted under the blower deck will automatically cut off the electrical power supply to the furnace when the blower panel is removed.

To remove bottom mounted filter (s) on all furnaces, push the looped end of the filter retainer to the side and then lift up. Reverse the procedure to reinstall filters.

Downflow/Horizontal Models

The filters in your downflow/horizontal furnace are located in the plenum or ductwork above the furnace.To check the filters, turn off the electrical supply to the furnace. Then remove the access panel and lift the filter(s) off the rack.

NOTE:The spring-loaded safety cutoff switch, mounted to the blower deck will automatically cut off the electrical supply to the furnace when the blower access door is removed.

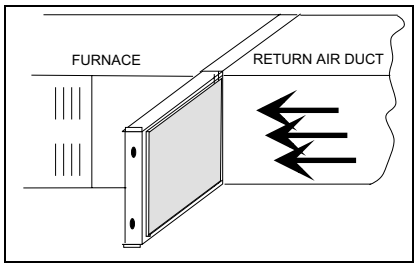


Downflow Furnace - Typical Filter Location

Horizontal Furnaces

Most horizontal furnaces have their filters located ina filter grille(s) so that it may be easily changed without gaining access to the attic or crawl space.

Some installations may have a filter rack near the furnace. With this type of accessory, unsnap the filter rack door and pull. The filter is attached to the door and will slide out. If you are unsure where the furnace filter is installed, check with the installer.



Horizontal Furnace - Typical Filter Location

HOW TO CLEAN YOUR FURNACE'S FILTER

High-velocity filters may be cleaned with a vacuum cleaner or washed with a garden hose. Be sure to shake off excess water before re-installing the filter.

MOTOR LUBRICATION

The motors in these furnaces are permanently lubricated, and require no periodic oiling.

INSTALLATION & MAINTENANCE INSTRUCTIONS

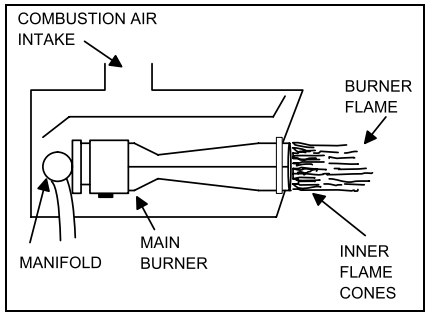
It is the owner's responsibility to ensure that an annual inspection of the entire heating portion of the unit is made by a qualified service agency.

The inspection should include heating element, vent/combustion air piping, to see that they are clear and free of obstructions and without holes or corrosion.

Make sure the horizontal run of the vent system slopes upward and all of the connections are secure.

Make sure the return air duct connections are physically sound and sealed to the furnace casing and terminates outside the space containing the furnace. Make sure no sagging, cracks, gaps, etc. exist around the base of the furnace.

Check the main burner flames for proper adjustment per the illustration below:



Proper Burner Flame Appearance

Routine periodic maintenance checks should be done on your furnace at least every time you check the filters.

Remove the front panels and the panel on the front of the burner box after turning the knob on the gas control to the OFF position. Check the following items:

⚠ CAUTION

Before proceeding, be sure the area is well ventilated. Turn the thermostat OFF. If the blower is running, wait until it stops automatically. Turn OFF the gas and electrical power supplies to the furnace. Check all metal parts and surfaces to be sure they have cooled to room temperature before you begin.

- Check for dust and lint on the sensor and main burners.
- Check combustion air and vent pipe for blockage, corrosion or leakage.
- Check all components to be sure they are in good condition and that there are no obvious signs of deterioration.

If all components appear to be in good operating condition, turn the gas control to the ON position after replacing the front panel of the burner box. Replace the front panels. Restore gas and power supplies to the furnace, and set thermostat to the desired temperature.

If, during your inspection of your furnace, you find any of the following conditions, do not operate the furnace:

- Excessive amounts of dust and lint on components.
- Damaged or deteriorated components or surfaces.
- Leaks or blockage in the vent pipe passages.

Call a certified dealer/servicing contractor to check your furnace, or for more information if you have questions about the operation of your furnace.

FILTER SIZES

UPFLOW MODELS	SIDE	BOTTOM
40/37/1000/A	16 x 25	14 x 25
60/55/1000/B	16 x 25	16 x 25
80/75/1200/B	16 x 25	16 x 25
80/75/1600/C	16 x 25	20 x 25
100/95/1400/C	16 x 25	20 x 25
100/95/2000/C	(2) 16 x 25	20 x 25
120/112/2000/D	(2) 16 x 25	22 x 25
140/130/2000/D	(2) 16 x 25	22 x 25

DOWNFLOW / HORIZONTAL MODELS	FILTER SIZE
All Models	(2) 14 x 25

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035-14379-000 REV C (900)
Supersedes: 035-14379-000 REV B (900)